

Title (en)  
Electric motor with a permanent magnet rotor

Title (de)  
Elektromotor mit Dauermagnetläufer

Title (fr)  
Moteur électrique avec rotor à aimants permanents

Publication  
**EP 1414130 A2 20040428 (EN)**

Application  
**EP 03007579 A 20030402**

Priority  
KR 20020065690 A 20021026

Abstract (en)  
An electric motor, more particularly, a rotor structure of an electric motor comprises: a stator including a plurality of teeth and coil wound on the teeth to form rotary magnetic flux by applied electric source; a rotary shaft; and a rotor rotatably installed in the stator, the rotor including a shaft insertion hole so that the rotary shaft can be inserted therethrough and fixed, wherein, the rotor includes a plurality of permanent magnet insertion slots of 'V' or 'U' shape formed in radial direction as centering around the shaft insertion hole, and permanent magnets are inserted and fixed into the permanent magnet insertion slots respectively, and a plurality of air gap expanding portions, on which air gaps from the teeth of the stator are expanded, are formed on an outer circumferential surface of the rotor. <IMAGE>

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**H02K 1/27**; **H02K 29/03**

IPC 8 full level  
**H02K 29/00** (2006.01); **H02K 1/27** (2006.01)

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**H02K 1/27** (2013.01 - KR); **H02K 1/2766** (2013.01 - EP US); **H02K 29/00** (2013.01 - KR)

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